SEMESTER END EXAMINATION, APRIL-MAY, 2026

Course Name:- Master of Computer Applications (MCA) **Semester:-II**
Paper Name:- Operating system **Paper Code:- MCA-023**
Time - 3Hrs + 20 minutes per hour extra time for V.I. & examinees with writer. **Max Marks-75**
Additional 30 Minutes for Mid-Test.
समय– 3 घण्टे+ 20 मिनटप्रति घंटेअतिरिक्त–दृष्टिबाधितएवंसहलेखकपरीक्षार्थियों के लिए। **अधिकतम अंक–75**
30 मिनटअतिरिक्तमिड–टेस्ट के लिए।

Instructions:

- The question paper consists of three sections namely A, B, C. All sections are compulsory.
- Section A- Each question carries **01**marks. All questions are compulsory.
- Section B- Answer any **4 out of 6** given questions. Each question carries **07 marks**.
- SectionC- Answer any **2 out of 3** given questions. Each question carries **16 marks**.

निर्देश:

- प्रश्न पत्र मेंतीन खण्ड अ, ब, व स हैं।सभी खण्डअनिवार्यहैं।
- खण्ड–अमेंप्रत्येकप्रश्न**एक**अंककाहै।सभीप्रश्नअनिवार्यहैं।
- खण्ड–बमे**छः**प्रश्नोंमेंसेकिन्ही**चार**प्रश्नों के उत्तरदें।प्रत्येकप्रश्न**07**अंककाहै।
- खण्ड–समें**तीन**प्रश्नोंमेंसेकिन्ही**दो**प्रश्नों के दें।प्रत्येकप्रश्न**16**अंककाहै।

Section – A (खण्ड–अ)
Objective Questions (वस्तुनिष्ठप्रश्न)

1. All Questions are Compulsory.
निम्नलिखित सभी प्रश्नअनिवार्यहैं। **1x15=15**

1. Which of the following is an example of system software?
   a) MS Word
   b) Operating System
   c) Web Browser
   d) Compiler
2. The main purpose of an operating system is to:
   a) Execute user programs only
   b) Manage hardware and software resources
   c) Design applications
   d) Perform calculations
3. Which of the following is a batch processing system?
   a) Real time OS
   b) Time sharing system
   c) Offline processing system
   d) Interactive system
4. The brain of the computer system is:
   a) RAM
   b) CPU
   c) Hard Disk
   d) I/O Devices
5. Which OS type allows multiple users to access the system at the same time?
   a) Single user OS
   b) Batch OS

c) Multi user OS
d) Embedded OS

b) True or False
सत्य अथवा असत्य बताइए।

1. Operating system acts as an interface between user and hardware.
2. Real time operating systems are used in time critical applications.
3. A process is a passive entity.
4. Time sharing systems improve CPU utilization.
5. Kernel is the outermost layer of OS.

c) Fill In The Blanks.
रिक्त स्थानों की पूर्ती कीजिये।

1. The core part of the operating system is called _____.
2. A _____ is an active program in execution.
3. _____ systems allow users to interact directly with the system.
4. _____ scheduling selects processes based on arrival time.
5. _____ condition is required for deadlock to occur.

Section – B (खण्ड–ब)
Short Answer Questions (लघुउत्तरीय प्रश्न)

2. Answer any four of the following questions. **4x7=28**
निम्नलिखितमेंसेकिन्हींं4प्रश्नों के उत्तरदें।

1. Define Operating System. Explain its primary objectives.
2. Differentiate between batch processing and time sharing systems.
3. Explain the concept of process and thread.
4. Describe different types of kernels.
5. What is CPU scheduling? Explain its importance.
6. Explain batch operating system.

Section – C (खण्ड–स)
Descriptive Questions(विवरणात्मकप्रश्न)

3. Answer any two of the following question. **2x16=32**
निम्नलिखितमेंसेकिन्हींंदोप्रश्नों के उत्तरदें।

1. What is CPU scheduling? Compare different scheduling algorithms with examples..
2. Describes the different types of operating system. Give their advantages and disadvantages.
3. Describe File Management, Memory Management and Device Management in detail.